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EXAMINER	
KHOO, FOONG LIN	
ART UNIT	**PAPER NUMBER**
2664	

DATE MAILED: 10/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/022,729	PARK ET AL.	
	Examiner	Art Unit	
	F. Lin Khoo	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/10/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-7, 9-10, 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bleier, Jr. et al. (U.S. Patent No. 6,832,184) in view of Shin (U.S. Patent No. 6,549,543).

Regarding Claim 1, Bleier, Jr. et al. discloses a simulator and verification tool (Fig. 10, element 1000 is equivalent to a packet service simulator) in a client/server environment for generating one or more LAN frames for enabling multiple client simulation at level 2 of the OSI model. The simulator includes an embedded protocol stack, which allows the manipulation of the simulated frames and allows the tool to respond to dynamic stack-related events in accordance with any level 2 LAN communications protocol. The simulator also includes one or more application programming interfaces ("APIs") for interaction between the various components of the tool and the protocol stack. The APIs allow the protocol stack to be replaced dynamically and/or to allow multiple simultaneous protocol stacks to be simulated

dynamically. The APIs also provide for future compatibility and thus extensibility of the simulation tool with any new protocol stacks which may be implemented in the future, without having to reinvent the bulk of the tool and/or the inclusion of new protocol stacks as the market changes (Fig. 10; Fig. 12; col 7, lines 28-45; col 12, lines 26-48. The simulator and verification tool include an embedded protocol stack which has network layer associated with network packet routine to perform packet servicing (Fig. 2 (element 206) and Fig. 10)). Bleier, Jr. et al. does not disclose a terminal for transmitting a packet call request message to the mobile telephone to establish a packet call for communication of packets with the mobile telephone, generating an Internet protocol packet after establishment of the packet call, transmitting it to the mobile telephone, and determining data processing characteristics of the mobile telephone based on a response packet received from the mobile telephone; and receiving a response control message to the packet call request message from the mobile telephone to verify the control message processing between the terminal and the mobile telephone, and transmitting the Internet protocol packet received from the mobile telephone to an external network and transmitting a corresponding response packet received from the external network to the mobile telephone, thereby enabling the mobile telephone to transmit the response packet to the terminal.

Shin discloses a terminal (Fig. 7, element 10) for transmitting a packet call request message (ATD command (see col 6, line 13-14) to the mobile telephone (Fig. 7, element 20) to establish a packet call for communication of packets with the mobile telephone, generating an Internet protocol packet after establishment of the packet call,

transmitting it to the mobile telephone, and determining data processing characteristics of the mobile telephone based on a response packet received from the mobile telephone (Fig. 7, from terminal (element 10) via protocol stack Application/TCP/IP/PPP to mobile telephone (element 20) through AI/TCP,ICMP/IP... of the protocol stack) ; and the base station (Fig. 7, element 30 - BS)/ mobile switching center (Fig. 7, element 50-MSC)/interworking function device (Fig. 7, element 60 - IWF) receiving a response control message (Fig.7, ICMP (Internet Control Message Protocol) in the protocol stack is equivalent to response control message) to the packet call request message from the mobile telephone to verify the control message processing between the terminal and the mobile telephone, and transmitting the Internet protocol packet received from the mobile telephone to an external network (Fig. 7, element 400 and 300 are external network) and transmitting a corresponding response packet received from the external network to the mobile telephone, thereby enabling the mobile telephone to transmit the response packet to the terminal (Fig. 7 the protocol stacks from terminal (10) to Internet (300) and from Internet (300) to terminal (10) via the protocol stacks setting up a bidirectional PPP connection (col 7, lines 21-28) is associated with a terminal for transmitting.a packet call request message to the mobile telephone to establish a packet call for communication of packets with the mobile telephone, generating an Internet protocol packet after establishment of the packet call, transmitting it to the mobile telephone, and determining data processing characteristics of the mobile telephone based on a response packet received from the mobile telephone; and a packet service simulator for receiving a response control message to the packet call request message from the mobile

telephone to verify the control message processing between the terminal and the mobile telephone, and transmitting the Internet protocol packet received from the mobile telephone to an external network and transmitting a corresponding response packet received from the external network to the mobile telephone, thereby enabling the mobile telephone to transmit the response packet to the terminal. Note: The base station (Fig. 7, element 30 - BS), mobile switching center (Fig. 7, element 50-MSC) and interworking function device (Fig. 7, element 60 - IWF) together performs the functions of a packet service simulator).

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the functions of the base station (BS), mobile switching center (MSC) and interworking function (IWF) as taught by Shin into the simulator and verification tool of Bleier, Jr. et al. to simulate and verify a data communication system and data communication operating method which can provide data communication service to a public switching telephone network, X.25 network, and Internet by extensively applying a packet assembler deassembler (PAD) function to an interworking function device of a CDMA type data communication system (col 2, line 64 through col 3, line 3).

Regarding Claim 2, Bleier, Jr. et al. discloses wherein an Internet protocol address is individually assigned to the terminal, the mobile telephone, and the packet service simulator (Fig. 8, elements 804a....804n; col 4, lines 32-37. Unique client-

specific addresses are the Internet protocol address individually assigned to the terminal, the mobile telephone, and the packet service simulator).

Regarding Claim 3, Bleier, Jr. et al. discloses wherein the mobile telephone is linked to the packet service simulator via a local area network (LAN), the packet service simulator being linked to the external network (Fig. 10, elements 1014 and 1018; col 11, lines 9-18; col 15, lines 19-21. The mobile telephone is linked to the packet service simulator via a local area network (LAN) (via LAN 1018 and LAN insertion 1014), the packet service simulator being linked to the external network).

Regarding Claim 4, Bleier, Jr. et al. discloses a simulator and verification tool. Bleier, Jr. et al. does not disclose wherein the packet service simulator analyzes the response control message received from the mobile telephone, generates a response packet when the response control message is successfully processed, and transmits it to the mobile telephone to establish the packet call. Shin discloses wherein the packet assembler deassembler (PAD) within the interworking function (IWF) device analyzes the response control message received from the mobile telephone, generates a response packet when the response control message is successfully processed, and transmits it to the mobile telephone to establish the packet call (Fig. 4, element 66, col 6, lines 13-31). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the functions of the base station (BS), mobile switching center (MSC) and interworking function (IWF) as taught by Shin into

the simulator and verification tool of Bleier, Jr. et al. to simulate and verify a data communication system and data communication operating method which can provide data communication service to a public switching telephone network, X.25 network, and Internet by extensively applying a packet assembler deassembler (PAD) function to an interworking function device of a CDMA type data communication system (col 2, line 64 through col 3, line 3).

Regarding Claim 5, Bleier, Jr. et al. discloses a simulator and verification tool. Bleier, Jr. et al. does not disclose wherein the packet service simulator comprises: a packet transmitter for transmitting data having an Internet protocol address of the terminal to the external network in an Ethernet packet format; and a packet receiver for receiving a packet destined for the Internet protocol address of the terminal from the external network and transmitting it to the mobile telephone, thereby enabling the mobile telephone to transfer the packet to the terminal. Shin discloses wherein the interworking function device (packet service simulator) comprises: a packet transmitter for transmitting data having an Internet protocol address of the terminal to the external network in an Ethernet packet format (Fig. 7 (element 60), Fig 4, element 320; col 5, lines 14-47. The PPP server 320 is associated with a packet transmitter for transmitting data having an Internet protocol address of the terminal to the external network in an Ethernet packet format as shown in Fig. 7 of the protocol stack indicating IP and Ethernet connection); and a packet receiver for receiving a packet destined for the Internet protocol address of the terminal from the external network and transmitting it to

the mobile telephone, thereby enabling the mobile telephone to transfer the packet to the terminal (Fig. 7 (element 60), Fig 4, element 320; col 5, lines 14-47. The PPP server 320 is associated with a packet receiver for receiving a packet destined for the Internet protocol address of the terminal from the external network and transmitting it to the mobile telephone, thereby enabling the mobile telephone to transfer the packet to the terminal as shown in Fig. 7 of the protocol stack indicating IP connection between the terminal (element 10) and Internet (element 300)). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the functions of the base station (BS), mobile switching center (MSC) and interworking function (IWF) as taught by Shin into the simulator and verification tool of Bleier, Jr. et al. to simulate and verify a data communication system and data communication operating method which can provide data communication service to a public switching telephone network, X.25 network, and Internet by extensively applying a packet assembler deassembler (PAD) function to an interworking function device of a CDMA type data communication system (col 2, line 64 through col 3, line 3).

Regarding Claim 6, Bleier, Jr. et al. discloses wherein the packet service simulator receives the packet destined for the Internet protocol access of the terminal in response to an address resolution protocol (ARP) request for the Internet protocol address of the terminal, sent from the external access network, using its physical address (col 14, line 54 through col 15, line 4. Data delivery (Fig. 10, element 1012) is responsible for handling the ARP processing using the MAC address (hardware client

address is the physical address) which is associated with the packet service simulator receiving the packet destined for the Internet protocol access of the terminal in response to an address resolution protocol (ARP) request for the Internet protocol address of the terminal, sent from the external access network, using its physical address).

Regarding Claim 7, Bleier, Jr. et al. discloses wherein the terminal executes a network application including Telnet, file transfer protocol (FTP), or the Web to generate an Internet protocol packet and transmit it to the mobile telephone, and receives a response packet to the Internet protocol packet from the mobile telephone to verify network data processing operations of the mobile telephone (Fig. 10, element 1004, col 11, line 34 through col 12, line 12. The script facility (Fig. 10 element 1004) provides the action of retrieving web pages, execution of FTPs and sending mail (telnet) simulating the workload for system under test. The script facility is associated with the terminal executing a network application including Telnet, file transfer protocol (FTP), or the Web to generate an Internet protocol packet and transmit it to the mobile telephone, and receives a response packet to the Internet protocol packet from the mobile telephone to verify network data processing operations of the mobile telephone).

Regarding Claim 9, Bleier, Jr. et al. discloses a simulator and verification tool. Bleier, Jr. et al. does not disclose wherein the terminal communicates packets with the mobile telephone according to a point-to-point protocol (PPP). Shin discloses wherein

the terminal communicates packets with the mobile telephone according to a point-to-point protocol (PPP) (Fig. 7, the protocol stack shows a PPP communication between the data terminal (element 10) and mobile station (element 20)). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the functions of the base station (BS), mobile switching center (MSC) and interworking function (IWF) as taught by Shin into the simulator and verification tool of Bleier, Jr. et al. to simulate and verify a data communication system and data communication operating method which can provide data communication service to a public switching telephone network, X.25 network, and Internet by extensively applying a packet assembler deassembler (PAD) function to an interworking function device of a CDMA type data communication system (col 2, line 64 through col 3, line 3).

Regarding Claim 10, Bleier, Jr. et al. discloses wherein a physical layer of the mobile telephone comprises an Ethernet, and a media control layer of the mobile telephone is modified into a module for supporting the Ethernet (col 14, lines 42-65. The simulated client is the mobile telephone which interfaces with a particular network medium in use (Ethernet) through the MAC layer, a component of the data link layer in a protocol stack in the data delivery. See Fig. 10, element 1012).

Regarding Claim 11, Bleier, Jr. et al. discloses a simulator and verification tool (Fig. 10, element 1000 is equivalent to a packet service simulator) and a method in a client/server environment for generating one or more LAN frames for enabling multiple

client simulation at level 2 of the OSI model. The simulator includes an embedded protocol stack, which allows the manipulation of the simulated frames and allows the tool to respond to dynamic stack-related events in accordance with any level 2 LAN communications protocol. The simulator also includes one or more application programming interfaces ("APIs") for interaction between the various components of the tool and the protocol stack. The APIs allow the protocol stack to be replaced dynamically and/or to allow multiple simultaneous protocol stacks to be simulated dynamically. The APIs also provide for future compatibility and thus extensibility of the simulation tool with any new protocol stacks which may be implemented in the future, without having to reinvent the bulk of the tool and/or the inclusion of new protocol stacks as the market changes (Fig. 10; Fig. 12; col 7, lines 28-45; col 12, lines 26-48. The simulator and verification tool include an embedded protocol stack which has network layer associated with network packet routine to perform packet servicing (Fig. 2 (element 206) and Fig. 10)). Further, Bleier, Jr. et al. discloses command and control services (Fig. 10, element 1002) which collects and reports simulation statistics and this is equivalent to the terminal verifying an operation of the network application based on the response packet and preparing statistic data for the received packet. Bleier, Jr. et al. does not disclose upon the mobile telephone receiving a packet call request for verification of a packet data service from the terminal and transmitting a corresponding call request control message, analyzing the call request control message received from the mobile telephone and verifying control signal processing between the mobile telephone and the terminal; upon successful control signal processing, generating a

packet corresponding to a response signal to the packet call request control message and transmitting it to the mobile telephone, thereby establishing a packet call to the mobile telephone; the terminal executing a network application, generating an Internet protocol packet and transmitting it to the mobile telephone; upon receiving the Internet protocol packet having an Internet protocol address of the terminal from the mobile telephone, transmitting the Internet protocol packet to the external network; receiving a response packet destined for the terminal from the external network and transmitting it to the mobile telephone;

Shin discloses an MSC (mobile switching center) (Fig. 7, element 50) and a packet assembler deassembler (PAD) within the interworking function (IWF) device (Fig. 4, element 60 and 66) upon the mobile telephone receiving a packet call request for verification of a packet data service from the terminal and transmitting a corresponding call request control message (Fig. 7, ICMP (Internet Control Message Protocol) in the protocol stack is equivalent to the call request control message), analyzes the call request control message received from the mobile telephone and verifying control signal processing between the mobile telephone and the terminal (col 6, lines 13-31);

upon successful control signal processing, the MSC (mobile switching center) (Fig. 7, element 50) and a packet assembler deassembler (PAD) within the interworking function (IWF) device (Fig. 4, element 60 and 66) generating a packet corresponding to a response signal to the packet call request control message and transmitting it to the mobile telephone, thereby establishing a packet call to the mobile telephone (Fig. 7, via

the protocol stack generates a packet corresponding to a response signal to the packet call request control message and transmitting it to the mobile telephone, thereby establishing a packet call to the mobile telephone);

the terminal executing a network application, generating an Internet protocol packet and transmitting it to the mobile telephone (Fig. 7, via the IP layer in the protocol stack generates an Internet protocol packet and transmitting it to the mobile telephone);

upon receiving the Internet protocol packet having an Internet protocol address of the terminal from the mobile telephone, a packet assembler deassembler (PAD) within the interworking function (IWF) device (Fig. 4, element 60 and 66) transmitting the Internet protocol packet to the external network (Fig. 7, element 400 and 300 are external network. Fig. 7 (element 60), Fig 4, element 320; col 5, lines 14-47. The PPP server 320 via the protocol stack is associated with receiving the Internet protocol packet having an Internet protocol address of the terminal from the mobile telephone, transmitting the Internet protocol packet to the external network);

a packet assembler deassembler (PAD) within the interworking function (IWF) device (Fig. 4, element 60 and 66) receiving a response packet destined for the terminal from the external network and transmitting it to the mobile telephone (Fig. 7 (element 60), Fig 4, element 320; col 5, lines 14-47. The PPP server 320 is associated with receiving a response packet destined for the terminal from the external network and transmitting it to the mobile telephone as shown in Fig. 7 of the protocol stack indicating IP connection between the terminal (element 10) and Internet (element 300)).

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the functions of the base station (BS), mobile switching center (MSC) and interworking function (IWF) as taught by Shin into the simulator and verification tool of Bleier, Jr. et al. to simulate and verify a data communication system and data communication operating method which can provide data communication service to a public switching telephone network, X.25 network, and Internet by extensively applying a packet assembler deassembler (PAD) function to an interworking function device of a CDMA type data communication system (col 2, line 64 through col 3, line 3).

Regarding Claim 12, Bleier, Jr. et al. discloses further comprising: assigning an Internet protocol address individually to the terminal, the packet service simulator and the mobile telephone (Fig. 8, elements 804a....804n; col 4, lines 32-37. Unique client-specific addresses are the Internet protocol address individually assigned to the terminal, the mobile telephone, and the packet service simulator); and the packet service simulator broadcasting an address resolution protocol (ARP) packet, including an Internet protocol address of the terminal and a physical address of the simulator, to the external network (col 14, line 54 through col 15, line 4. Data delivery (Fig. 10, element 1012) is responsible for handling the ARP processing using the MAC address (hardware client address is the physical address)). Bleier, Jr. et al. does not disclose recording it on a gateway for connection to the external network so as to receive a packet having the address of the terminal. Shin discloses a router (Fig. 7, element 310

which is a gateway) for connection to the external network so as to receive a packet having the address of the terminal (col 7, lines 8-28). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the functions of the base station (BS), mobile switching center (MSC) and interworking function (IWF) and router (gateway) as taught by Shin into the simulator and verification tool of Bleier, Jr. et al. to simulate and verify a data communication system and data communication operating method which can provide data communication service to a public switching telephone network, X.25 network, and Internet by extensively applying a packet assembler deassembler (PAD) function to an interworking function device of a CDMA type data communication system (col 2, line 64 through col 3, line 3).

Regarding Claim 13, Bleier, Jr. et al. discloses a simulator and verification tool. Bleier, Jr. et al. does not disclose wherein the step of the terminal transmitting the Internet protocol packet to the mobile telephone comprises: establishing point-to-point protocol (PPP) access to the mobile telephone; and transmitting the Internet protocol packet to the mobile telephone according to a PPP protocol. Shin discloses wherein the step of the terminal transmitting the Internet protocol packet to the mobile telephone comprises: establishing point-to-point protocol (PPP) access to the mobile telephone; and transmitting the Internet protocol packet to the mobile telephone according to a PPP protocol (Fig. 7, the protocol stack shows a PPP communication access to the mobile telephone (element 10); and transmitting the Internet protocol packet to the mobile telephone according to a PPP protocol. See col 7, lines 8-28). At the time the

invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the functions of the base station (BS), mobile switching center (MSC) and interworking function (IWF) as taught by Shin into the simulator and verification tool of Bleier, Jr. et al. to simulate and verify a data communication system and data communication operating method which can provide data communication service to a public switching telephone network, X.25 network, and Internet by extensively applying a packet assembler deassembler (PAD) function to an interworking function device of a CDMA type data communication system (col 2, line 64 through col 3, line 3).

Regarding Claim 14, Bleier, Jr. et al. discloses a simulator and verification tool wherein the step of receiving the response packet destined for the terminal from the external network comprises: transmitting to the external network the ARP response packet having a physical address of the simulator and an Internet protocol address of the terminal to the ARP request packet requesting the physical address of the terminal sent from the external network (col 14, line 54 through col 15, line 4. Data delivery (Fig. 10, element 1012) is responsible for handling the ARP processing using the MAC address (hardware client address is the physical address). Bleier, Jr. et al. does not disclose receiving the response packet destined for the terminal. Shin discloses a packet assembler deassembler (PAD) and a PPP server within the interworking function (IWF) device (Fig. 4, element 60, 66, 320) receiving the response packet destined for the terminal (see Fig. 7). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the functions of the base

station (BS), mobile switching center (MSC) and interworking function (IWF) as taught by Shin into the simulator and verification tool of Bleier, Jr. et al. to simulate and verify a data communication system and data communication operating method which can provide data communication service to a public switching telephone network, X.25 network, and Internet by extensively applying a packet assembler deassembler (PAD) function to an interworking function device of a CDMA type data communication system (col 2, line 64 through col 3, line 3).

Regarding Claim 15, Bleier, Jr. et al. discloses a simulator and verification tool. Bleier, Jr. et al. does not disclose further comprising: the terminal requesting cancellation of a packet call established between the mobile telephone and the packet service simulator; the mobile telephone transmitting a call cancellation control message corresponding to the cancellation request to the packet service simulator; and the packet service simulator canceling the packet call to the mobile telephone based on the received control message and transmitting a corresponding response message to the mobile telephone to inform that the packet call is cancelled. Shin discloses further comprising: the terminal requesting cancellation of a packet call established between the mobile telephone and the packet service simulator; the mobile telephone transmitting a call cancellation control message corresponding to the cancellation request to the packet service simulator; and the packet service simulator canceling the packet call to the mobile telephone based on the received control message and transmitting a corresponding response message to the mobile telephone to inform that

the packet call is cancelled (col 1, lines 36 – 54. It would be obvious that a call connection and disconnection by the terminal is possible by the AT command. The connection/disconnection process is associated with the terminal canceling a packet call and the mobile station, MSC and IWF responding to the cancellation request). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the functions of the base station (BS), mobile switching center (MSC) and interworking function (IWF) as taught by Shin into the simulator and verification tool of Bleier, Jr. et al. to simulate and verify a data communication system and data communication operating method which can provide data communication service to a public switching telephone network, X.25 network, and Internet by extensively applying a packet assembler deassembler (PAD) function to an interworking function device of a CDMA type data communication system (col 2, line 64 through col 3, line 3).

3. Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bleier, Jr. et al. (U.S. Patent No. 6,832,184) in view of Shin (U.S. Patent No. 6,549,543) and further in view of Abrol (U.S. Patent No. 6,654,360).

Regarding Claim 8, Bleier, Jr. et al. and Shin disclose a simulator and verification tool with a terminal for transmitting a packet call request message to the mobile station to establish a packet call for communication of packets with the mobile station,

generating an Internet protocol packet after establishment of the packet call, transmitting it to the mobile station receiving a response control message to the packet call request message from the mobile station to verify the control message processing between the terminal and the mobile station, and transmitting the Internet protocol packet received from the mobile telephone to an external network. Further, Shin discloses an RS-232-E cable (Fig. 7) connection between the terminal (Fig. 7, element 10) and the mobile station (Fig. 7, element 20). Bleier, Jr. et al. and Shin does not disclose wherein the terminal is linked to the mobile telephone (mobile station) via a universal serial bus (USB).

Abrol discloses a serial port (Fig. 4, element 412) which could be RS-232, Universal Serial Bus (USB), or any other communication interface requiring a physical cable between remote network node 102 (Fig. 1 equivalent to a terminal) and subscriber station 106. (Fig. 1 equivalent to mobile telephone) (see col 9, line 55 through col 10, line 11).

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to use a USB cable instead of an RS-232-E cable between the remote network node 102 (Fig. 1 equivalent to a terminal) and subscriber station 106. (Fig. 1 equivalent to mobile telephone) as taught by Abrol in the system of Bleier, Jr. et al. and Shin to allow for high speed and easy connection (plug-and-play) without having to reboot the data terminal in order for the data terminal to exchange packets with the mobile telephone.

Regarding Claim 16, Bleier, Jr. et al. and Shin disclose a simulator and verification tool with a terminal for transmitting a packet call request message to the mobile station to establish a packet call for communication of packets with the mobile station, generating an Internet protocol packet after establishment of the packet call, transmitting it to the mobile station receiving a response control message to the packet call request message from the mobile station to verify the control message processing between the terminal and the mobile station, and transmitting the Internet protocol packet received from the mobile telephone to an external network Further, Shin discloses an RS-232-E cable (Fig. 7) connection between the terminal (Fig. 7, element 10) and the mobile station (Fig. 7, element 20) and Bleier, Jr. et al. discloses the mobile telephone linked to the packet service simulator via a local area network (LAN) (via LAN 1018 and LAN insertion 1014). Bleier, Jr. et al. and Shin does not disclose wherein the mobile telephone is linked to the terminal via a universal serial bus (USB).

Abrol discloses a serial port (Fig. 4, element 412) which could be RS-232, Universal Serial Bus (USB), or any other communication interface requiring a physical cable between remote network node 102 (Fig. 1 equivalent to a terminal) and subscriber station 106. (Fig. 1 equivalent to mobile telephone) (see col 9, line 55 through col 10, line 11).

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to use a USB cable instead of an RS-232-E cable between the remote network node 102 (Fig. 1 equivalent to a terminal) and subscriber station 106. (Fig. 1 equivalent to mobile telephone) as taught by Abrol in the system of Bleier, Jr. et

al. and Shin to allow for high speed and easy connection (plug-and-play) without having to reboot the data terminal in order for the data terminal to exchange packets with the mobile telephone.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,404,754 to Lim relates to a radio packet data terminal and a method of determining an Internet interworking protocol address which use added options according to the existence/nonexistence of an Internet packet data terminal identifier of the terminal when a packet data service is requested for an Internet connection under the support of a radio packet data service network structure and a packet data communication protocol.

U.S. Patent No. 6,898,640 to Kurita et al. relates to a communication system between a mobile station and a server apparatus using the transport layer (TL) instead of TCP/IP.

U.S. Patent No. 6,370,394 to Anttila relates to a mobile station comprising connecting means for establishing a telecommunication connection and transferring information between the mobile station and data transfer network.

U.S. Patent No. 5,394,540 to Barrington et al. relates to a system for testing one or more communication network components comprising a network entity simulator for

emulating message communication among network entities and the one or more network components under test, and a message processor for intercepting predefined messages between the network entity simulator and the network components to examine, change, or delete intercepted messages.

The above prior art are cited to further show the same field of endeavor with respect to the applicant's claimed invention.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to F. Lin Khoo whose telephone number is 571-272-5508. The examiner can normally be reached on flex time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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